

## Letter/Attachment for GTCC EIS Scoping Comment #91

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**Oregon**  
Theodore R. Kulongoski, Governor



**OREGON**  
DEPARTMENT OF  
**ENERGY**

625 Marion St. NE  
Salem, OR 97301-3737  
Phone: (503) 378-4040  
Toll Free: 1-800-221-8035  
FAX: (503) 373-7806  
[www.energy.state.or.us](http://www.energy.state.or.us)

September 20, 2007

Mr. James Joyce  
GTCC EIS Document Manager  
Office of Regulatory Compliance (EM-10)  
U.S. Department of Energy  
1000 Independence Avenue, SW.  
Washington, DC 20585-0119

Dear Mr. Joyce:

Oregon appreciates the opportunity to comment on the scope for the Greater-Than-Class C Low-Level Radioactive Waste Environmental Impact Statement (GTCC LLW EIS).

As we noted in comments submitted at the August 27, 2007 scoping meeting in Troutdale, the State of Oregon opposes pursuing this action at the Hanford Site. Bringing more waste to a site that has the immense environmental problems that still exist at Hanford would be a detriment to the cleanup.

Despite our objections to disposing of this waste at Hanford, we are supportive of efforts to determine a disposal path for this waste.

We are hopeful that the GTCC LLW EIS will provide specific details about this proposal that so far have been lacking. The GTCC LLW EIS is at present unacceptably vague in its identification of "GTCC-like" waste. The U.S. Department of Energy (DOE) should define in detail what is meant by "GTCC-like" and provide a detailed inventory of the amounts, hazards and makeup of wastes to be included, and the treatments and waste forms proposed.

DOE is simultaneously pursuing the Global Nuclear Energy Partnership (GNEP) Programmatic Environmental Impact Statement. The actions taken under that PEIS could substantially alter the amount and possibly the character and composition of wastes evaluated under this EIS. The GTCC LLW EIS must therefore consider the range of reasonable alternatives proposed in GNEP and include in its analysis disposal of the resulting new generated wastes.

### Site Selection

Federal regulations require disposal of GTCC LLW in a geologic repository, unless an alternate method of disposal is proposed by DOE and accepted by the Nuclear Regulatory Commission (NRC). Because the wastes covered by the GTCC LLW EIS have extremely long half-lives and a high degree of hazard, these wastes must be treated, managed and disposed by means and in ways that respect the incredibly long duration of the hazard they

will pose. This strongly argues for extremely durable and resistant waste forms, disposed in highly stable locations with no likelihood of migration or movement over geologic time periods. We therefore believe DOE should abandon the evaluation or consideration of all near-surface and intermediate depth waste site alternatives and focus solely on deep repository disposal. If DOE retains consideration of near-surface or intermediate depth disposal, the GTCC LLW EIS must clearly explain the criteria by which the NRC would use to approve an alternative to geologic disposal.

The GTCC LLW EIS must also clearly explain the criteria for selecting an acceptable site or sites for disposal of these wastes. Disposal locations should be identified based on objective and defensible scientific criteria. The criteria should include, but not be limited to:

- Technical acceptability (seismic; flooding; volcanism and other risks),
- Geologic and hydrogeologic acceptability (soil properties; soil profiles; soil and waste interactions and chemistries, heterogeneity, preferential flow paths and mechanisms),
- Environmental acceptability (existing contamination and cleanup actions; rare, threatened and endangered species; special habitats and related issues; national monument status and others),
- Acceptable risk to nearby populations,
- Compliance with Native American Treaties and regulatory agreements.

#### **Waste Treatment, Disposal and Transportation**

The GTCC LLW EIS must fully explain and evaluate:

- the form, composition and volume of all wastes covered by the EIS.
- the treatment processes, waste forms, durability and longevity of all waste forms proposed.
- how DOE proposes to immobilize volatile and highly mobile radioactive materials such as technetium, cesium, iodine, neptunium and uranium.
- the cumulative impacts if the wastes are disposed at a site where waste has already been disposed or released, or where disposals are anticipated in the future.
- the transport risks for all GTCC LLW waste to be transported, including the modes of shipment; potential routing; the security risks; the environmental and population consequences of releases from a transportation accident or a hostile act; and other factors as appropriate.
- the total lifecycle environmental impacts and lifecycle costs of each alternative proposed for each site.
- how long-term institutional controls will prevent access to the wastes over tens of thousands of years. The site selection, waste form and repository system design must be such that the wastes remain in place and unaffected by the changes in politics, societies, environment, weather and other factors that will occur over the considerable length of time these wastes remain dangerous.

### **Hanford Specific Issues**

As we mentioned earlier, the Hanford Site has extensive contamination and waste management challenges as the result of 45 years of plutonium production. During its production years, extensive amounts of radioactive and chemically hazardous wastes have been disposed to the subsurface at Hanford in all manner of methods. Waste has been buried in shallow landfills. Waste has been disposed at intermediate depths. Waste has even been injected into the aquifer. In most cases, these disposal methods have failed, resulting in extensive contamination. During the past 18 years, more than \$25 billion of federal tax dollars have been spent in an effort to clean up this waste.

It doesn't stop there. DOE will be cleaning up the existing mess at Hanford for many decades to come, at a cost of many tens of billions of dollars. The precise costs and duration of the cleanup remains unknown. The problems DOE faces at Hanford are so daunting that no precise estimate is possible. Even when the work is complete to the best of our collective ability, extensive contamination will remain.

As far as considering near-surface and intermediate depth disposal for these highly-radioactive, long-lived wastes, DOE's experiences at Hanford clearly demonstrate the fallacy of this proposal.

If, despite these past failures, DOE retains Hanford for analysis as a disposal site in the EIS, DOE must also include in its analysis the reasonably foreseeable impacts of related actions including but not limited to:

- 1) Resource Conservation and Recovery Act / Model Toxics Control Act actions and decisions for clean-up of Hanford waste sites.
- 2) Comprehensive Environmental Response, Compensation and Liability Act actions and decisions for clean-up of Hanford waste sites.
- 3) Impacts from wastes brought to Hanford for disposal as a result of DOE's 1999 Programmatic Waste Management Environmental Impact Statement.
- 4) Impact from actions and decisions made subsequent to DOE's Tank Closure & Waste Management Environmental Impact Statement.
- 5) Potential impacts from proposals to construct the Black Rock Dam and its consequent impacts to the groundwater under the Hanford Site.
- 6) Potential impacts from the injection of large volumes of carbon dioxide into the basalt under the Hanford Site associated with the federal government's carbon sequestration demonstration project.

If you have questions regarding our comments, or would like more details, please contact me at (503) 378-4906 or Dirk Dunning on my staff at (503) 378-3187.

Sincerely,

A handwritten signature in black ink, appearing to read "Ken Niles". The signature is fluid and cursive, with the first name "Ken" being more prominent than the last name "Niles".

Ken Niles  
Assistant Director

cc: Shirley Olinger, U.S. Department of Energy, Office of River Protection  
Dave Brockman, U.S. Department of Energy, Richland Office  
Jane Hedges, Washington Department of Ecology  
Nick Ceto, U.S. Environmental Protection Agency  
Stuart Harris, Confederated Tribes of the Umatilla Indian Reservation  
Gabe Bohnee, Nez Perce Tribe  
Russell Jim, Yakama Nation  
Susan Leckband, Hanford Advisory Board Chair

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